

Application No. 10/608,880

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Please cancel claims 2, 7-11, 15, 21-22, 24, 29-34, 38, 45, and 48-52 without prejudice.

Listing of Claims:

1. (currently amended) An optical encoder comprising:  
an optical grating including alternating light areas and dark areas for modulating a beam of light;  
a sensor for sensing modulated light provided by the optical grating;  
the optical grating and the sensor being movable relative to each other;  
wherein the optical grating includes an optical track comprising a series of contiguously adjacent light areas that are substantially uniformly spaced center to center so as to have substantially uniform pitch, the series of contiguously adjacent light areas including (a) includes a first plurality of contiguously adjacent first light areas of first light area heights and (b) a plurality of second light areas of a substantially constant second light area height, wherein the contiguously adjacent first light areas and the second light areas are substantially uniformly spaced and wherein the contiguously adjacent first light areas are optically configured to change an amplitude of an output of the sensor each of the first light area heights is different from the substantially constant second light area height.

Application No. 10/608,880

2. (canceled)

3. (original) The optical encoder of claim 1 wherein the contiguously adjacent first light areas are shorter than the second light areas.

4. (original) The optical encoder of claim 1 wherein the contiguously adjacent first light areas are shorter than the second light areas and are of gradually changing height.

5. (original) The optical encoder of claim 1 wherein the contiguously adjacent first light areas are taller than the second light areas.

6. (original) The optical encoder of claim 1 wherein the contiguously adjacent first light areas are taller than the second light areas and are of gradually changing height.

7. - 11. (canceled)

12. (original) The optical encoder of claim 1 wherein the light areas include non-linear sides.

13. (original) The optical encoder of claim 1 wherein the plurality of second light areas are disposed on both sides of the contiguously adjacent first light areas.

14. (currently amended) An optical encoder comprising:

Application No. 10/608,880

an optical grating including alternating light areas and dark areas for modulating a beam of light, wherein the dark areas include non-linear sides;

a sensor for sensing modulated light provided by the optical grating;

the optical grating and the sensor being movable relative to each other; and

wherein the optical grating includes an optical track comprising a series of contiguously adjacent light areas that are substantially uniformly spaced center to center so as to have substantially uniform pitch, the series of contiguously adjacent light areas including a first plurality of contiguously adjacent first light areas and a plurality of second light areas, wherein the contiguously adjacent first light areas and the second light areas are substantially uniformly spaced and wherein the contiguously adjacent first light areas are transmissively different from the second light areas.

15. (canceled)

16. (original) The optical encoder of claim 14 wherein the second light areas are of substantially identical lightness.

17. (original) The optical encoder of claim 14 wherein the contiguously adjacent first light areas are darker than the second light areas.

18. (original) The optical encoder of claim 14 wherein the contiguously adjacent first light areas are lighter than the second light areas.

Application No. 10/608,880

19. (original) The optical encoder of claim 14 wherein the contiguously adjacent first light areas are less transmissive than the second light areas.

20. (original) The optical encoder of claim 14 wherein the contiguously adjacent first light areas are more transmissive than the second light areas.

21. - 22. (canceled)

23. (currently amended) An optical grating comprising: alternating light areas and dark areas for modulating a beam of light; and

wherein the light areas comprise a series of contiguously adjacent light areas that are substantially uniformly spaced center to center so as to have a substantially uniform pitch, the series of contiguously adjacent light areas including (a) a first plurality of contiguously adjacent first light areas of first light area heights and (b) a plurality of second light areas of a substantially constant second light area height, wherein the contiguously adjacent first light areas and the second light areas are substantially uniformly spaced and wherein the contiguously adjacent first light areas are optically different from the second light areas each of the first light area heights is different from the substantially constant second light area height.

24. (canceled)

25. (original) The optical grating of claim 23 wherein the contiguously adjacent first light areas are shorter than the second light areas.

Application No. 10/608,880

26. (original) The optical grating of claim 23 wherein the contiguously adjacent first light areas are shorter than the second light areas and are of gradually changing height.

27. (original) The optical grating of claim 23 wherein the contiguously adjacent first light areas are taller than the second light areas.

28. (original) The optical grating of claim 23 wherein the contiguously adjacent first light areas are taller than the second light areas and are of gradually changing height.

29. – 34. (canceled)

35. (original) The optical grating of claim 23 wherein the light areas include non-linear sides.

36. (original) The optical grating of claim 23 wherein the plurality of second light areas are disposed on both sides of the contiguously adjacent first light areas.

37. (currently amended) An optical grating comprising:  
alternating light areas and dark areas for modulating a beam of light, wherein the dark areas include non-linear sides; and  
wherein the light areas comprise a series of contiguously adjacent light areas that are substantially uniformly spaced center to center so as to have a substantially uniform pitch, the series of contiguously adjacent light areas including (a) a first plurality of contiguously adjacent first light areas and a plurality of second light areas, wherein the contiguously adjacent first light areas and the second light areas are substantially uniformly spaced and

Application No. 10/608,880

wherein the contiguously adjacent first light areas are transmissively different from the second light areas.

38. (canceled)

39. (original) The optical encoder of claim 37 wherein the second light areas are of substantially identical lightness.

40. (original) The optical encoder of claim 37 wherein the contiguously adjacent first light areas are darker than the second light areas.

41. (original) The optical encoder of claim 37 wherein the contiguously adjacent first light areas are lighter than the second light areas.

42. (original) The optical encoder of claim 37 wherein the contiguously adjacent first light areas are less transmissive than the second light areas.

43. (original) The optical encoder of claim 37 wherein the contiguously adjacent first light areas are more transmissive than the second light areas.

44. (currently amended) An optical grating comprising:  
alternating light areas and dark areas for modulating a beam of  
light; and

wherein the light areas comprise a series of contiguously adjacent light areas that are substantially uniformly spaced center to center so as to have a substantially uniform pitch, the series of contiguously adjacent light areas including (a) a first light area of a first light area height and a

Application No. 10/608,880

plurality of second light areas of a substantially constant second light area height, wherein the first light area and the second light areas are substantially uniformly spaced and wherein the first light area height is optically different from the substantially constant second light areas area height.

45. (canceled) The optical grating of claim 44 wherein the dark areas are of substantially identical width.

46. (original) The optical grating of claim 44 wherein the first light area is shorter than the second light areas.

47. (original) The optical grating of claim 44 wherein the first light area is taller than the second light areas.

48. – 52. (canceled)

53. (original) The optical grating of claim 44 wherein the light areas include non-linear sides.

54. (currently amended) The optical grating of claim 44 wherein the plurality of second light areas are disposed on both sides of the contiguously adjacent first light areas area.